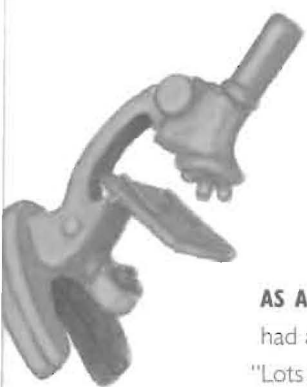


BY
PATTY
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BUILDING CONFIDENCE



AS AN UNDERGRADUATE, Dr. Erika Camacho had a funny feeling she didn't quite belong. "Lots of people thought I was there to fill a quota," she recalls. But she had sacrificed to get there and refused to give up: "And that's what you keep telling yourself, 'Once I get my PhD, it will stop.'" Well, not exactly.

Dr. Scottie Henderson (Diné) sat in chem-

istry class and listened to classmates talk about their high-achieving parents who were professors. She felt small, like she didn't belong: "People talk about you, 'You must have gotten in through the back door.' I began to think, 'They're right, I don't belong here.'"

Both women experienced what clinical psychologists Pauline Clance and Suzanne Imes called the "Impostor Phenomenon" in 1978. Now commonly known as the Imposter Syndrome, the term applied

to high-performing but inwardly anxious women who don't experience an internal sense of success.

For Camacho and Henderson, being women of color added to feelings of not quite belonging—so did entering predominantly male fields. Luckily, both women found the inner strength to rise above feeling inadequate, and they stuck with school. The Imposter Syndrome is known to affect men, as well.

A Magic Formula for Building Confidence?

What is the magic formula to boost a person's confidence level? For César Rios, the future was a confusing mixed message—his mother encouraged him to get an education and his hardworking father told him to get a job! He entered community college with no good ideas. "I was just running around like a headless chicken," he admits.

Then there's Ian Colon-Pagan, who at age 11 declared his homosexuality to his family, refusing to live a closeted life. His family

embraced him, his sexuality, and his scientific aspirations. He credits their support with helping him to pursue his dream of becoming a meteorologist, to persevere even when 10 of the 11 graduate schools he applied to rejected him.

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The Power of a Good Mentor

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Camacho, now assistant professor of mathematics, Arizona State University, Tempe, had a head start in the mentoring area. Her high school teacher was Jaime Escalante, made famous in the movie *Stand and Deliver*. "What Escalante did was help us believe in ourselves," she

recalls. "If you don't believe in yourself, you're not going to make much of a difference."

She needed to believe that, especially since she was entering a field dominated by white males. "Even students, when they see you in front of the board, have a hard time seeing you as a professor. Frankly, they see you as a maid!" she says, still in shock from her experience at another university—the racist remarks from her students there.

Today in her classroom at ASU, she doesn't face that same hostility. Striding into a room, she greets students, confidently reminding them, "Math is sexy!"

Her own experience sometimes lets her spot students who suffer from some form of the Imposter Syndrome. "They can be very shy in class," she says. "When you ask a question they may hesitate—but when you push them, they'll give you the answer."

Camacho mentions a Latina she had in class recently. The student, a freshman, was enrolled in an honors class usually reserved for juniors and seniors. When she said to her that she must be very smart, Camacho recalls that the student said, "'No, I don't think so.'" Camacho remarks that it's like pulling teeth to get these students to acknowledge their intelligence. "But other professors won't do that, and they'll assume the worst, 'She doesn't care or she's lazy!'"

Rios, now attending Evergreen Valley College in San Jose, California, laughs as he looks back at his first semesters at community college. "It's quite funny, at De Anza

I'd sit in the back and quietly turn in my homework."

When Rios transferred to Evergreen he tried to do the same, go to lectures and sit, hiding in the back: "But when I met Mr. (Alfred) Gonzales, I think his energy transferred to me—he's pretty happy and outgoing. Now I'm the one who asks questions and jokes with the teachers."

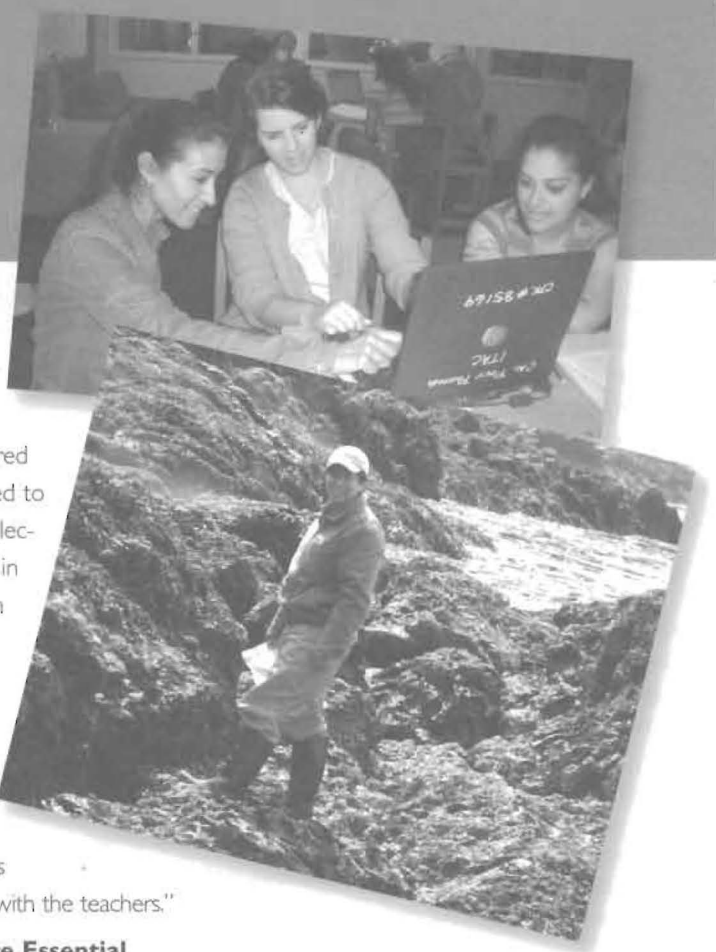
Communities Are Essential

A professor helped Rios build his confidence, but for many students that isn't the case.

In the late '70s, Dr. Uri Treisman, who taught at the University of California, Berkeley, wondered why so many freshmen minority students did so poorly in his calculus class. His 18-month ethnographic study found that social and intellectual isolation led to students feeling demoralized, disoriented, and in many cases, they even dropped out of school. He came to believe that students needed a viable, robust multiethnic community with a shared interest in mathematics.

Organizations like SACNAS offer students and professionals a crucial

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ABOVE (TOP TO BOTTOM) Mathematics professor Erika Camacho's confidence was first fostered by her high school math teacher. Now, mentoring is a cornerstone of her academic work. Pictured here, Camacho works with students at Cal Poly Pomona.

Out in the field at Friday Harbor Lab in the San Juan Islands, Washington State, Dr. Scottie Henderson learned that an essential tool for building confidence is the ability to ask for help.



RIGHT

President of the SACNAS chapter at Evergreen Community College in San Jose, César Ríos spoke to high school students at the chapter's annual science outreach conference.

FAR RIGHT

Ian Colon-Pagan, now a graduate student, is pictured here on the day of his graduation from college. He is holding two flags—one represents his pride in being Puerto Rican, the other in being part of the gay community.

place to build community, form networks, and socialize in a place that links race, ethnicity, and shared interests in the STEM fields.

After years of feeling isolated, Camacho met Professor Carlos Castillo-Chavez who introduced her to SACNAS in her senior year of college. Everything "changed dramatically"—suddenly, she says, she had a support group of her peers and professionals willing to help her. "It gives you a sense of belonging in the academic world," and she adds, "I wouldn't be here if it wasn't for those people who gave to me."

Colon-Pagan is currently a graduate student at Georgia Institute of Technology in Atlanta. He started college in his native Puerto Rico, and even there he felt alienated due to his choice of study: atmospheric science. He transferred to North Carolina Agriculture and Technical State University, a predominantly black university, for his master's. "Being the only Latino and openly gay student in his department at NCA&TSU," he says, he felt more isolated and longed to speak Spanish.

SACNAS gave Colon-Pagan a sense of belonging. He's also involved with an even more specialized group, NOGLSTP, the National Organization of Gay and Lesbian Scientists and Technical Professionals, Inc. "I wanted to be out

but not the average gay," he declares. "Most people think we are only dancers or hairstylists, but I show them that we are more than that...we are represented in so many fields."

Finding Your Place

So whether you're gay, Latino, Native American, a woman, or from another country—how do you figure out how to fit into the college scene?

Stanford psychologists Drs. Greg Walton and Geoffrey Cohen designed a 60-minute exercise that influenced the performance of minority students and increased their GPA from their freshman to their senior years. The students in the treatment group read surveys and essays from upperclassmen representing various races and ethnicities. The essays talked about the difficult adjustments they had fitting in when they first started college.

Some of those hardships included being intimidated by professors, snubbed by classmates, or ignored when they asked for help. Yet they persevered and overcame those initial difficulties and were successful in college. The idea was: that transition to college can be tough for anyone, regardless of who you are or where you come from.

Dr. Henderson had to learn that the hard way. Today she's a biology instructor at Cerritos College in Norwalk, California, but when she transferred from a community college to the University of California, Santa Cruz, she was pretty lost. The layout of the organic chemistry lab was particularly new territory. Frustrated, she finally went to the teaching assistant...and started crying. "I felt so lost," she recalls, that she asked for help. But first she had to face a stereotype: the TA asked, "Do you speak English? Am I speaking too fast for you?" "Uh, I've been speaking English to you this whole time," thought Henderson, "Yeah, English is my first language." After that fumble in communication, the TA suggested meeting and going through a dry run with her to show her where things were kept in the lab. It worked. "It just gave me a little more confidence."

But Henderson's transition to her new college wasn't yet complete. She was in what students call a "weeder class," one that's typically very difficult and where few pass. When the first exam

results came back she was devastated. "I had failed," she recalls, "the lowest grade I ever had." Henderson was depressed and didn't want to talk to anyone about it. As rotten luck would have it, she found herself in the lab after class with another student, a white female, who wanted to know how she did on the exam. "My face got hot. I didn't want to tell her." Finally Henderson relented and said she had failed. Her excited classmate gave her the good news saying, "The grades are curved! You got an A!" "What?" chuckles Henderson now at the memory—curving was a new concept to her. "You mean I actually did better than most of my classmates?" she recalls thinking. So much for coming in the back door. For the record, Henderson earned an A in that class.

The Confidence to Face Cultural Challenges

Many students of color face cultural challenges when it comes to their educational pursuits. For Rios, it was choosing between a college education or working his way up the corporate ladder at a juice store. "I got hired and promoted quickly, and was on track to being a manager," he says. Yet he questioned if that was what he wanted to do for the rest of his life.

His mother was saying go to college, but his father was following in the footsteps of his own father, Rios' grandfather, who worked till he was in his mid-80s. "My dad learned by that example. My grandfather is an inspiration. He was never the type to sit down," says Rios. "That's how my father is—you always have to keep busy!" Consequently, Rios couldn't study at home because, he says, all his father saw was that he was sitting down reading a book. It didn't look good; it looked like he was being lazy. So Rios found other places to study.

Later he met his mentor, Alfred Gonzales, who introduced him to SACNAS. Today when he sees a fellow Latino student he mentions SACNAS. "Maybe they aren't quite sure, like I was," he says, happy to share some inspiration with others.

Peer-to-Peer Support

Colon-Pagan is also eager to encourage students when he goes home to Puerto Rico. "At the university I talked to some of the students about career choices. They were struggling with, 'What am I going to do?' I said, 'I'm just an average student. I'm not a 4.0, but I know what I can give,'" he shares with them. "I like research, leadership, getting everyone involved. I'm really good at networking." From being rejected by 10 of the 11 schools he applied to for grad school, he was accepted by all three schools he applied to for his PhD.

For Colon-Pagan, the worst consequence would have been not finishing his education and allowing others to take away his dream. Colon-Pagan dreams of working at NOAA or the National Weather Service. When he was four-years-old, Hurricane Hugo devastated his homeland. "I'm passionate about it," he says of learning all he can

about how a hurricane forms. "How it can affect people who are not prepared, how strong winds affect communities."

Inspiring by Example

Camacho relishes teaching now, and stays involved in SACNAS because it affected her so powerfully. "I didn't have to stop being Latina to be a scientist, to be a mathematician!" she enthuses. "You see adults who are professionals and who look like you. I don't think others realize how much they can inspire a student just by being there!"

Henderson also enjoys teaching, and introduces her students to biology and to herself. "I always tell them that my name is Scottie because my dad was a *Star Trek* fan!" she chuckles." In addition to questions about her name, she's gotten used to fielding questions about her ethnicity. Students say, "You look Asian, but you're not Asian." No, she isn't. Her mother is Mexican American and her father is Navajo Indian from the Southwest. Working at a minority-serving institution, Henderson says she believes her students see her as one of them, non-white, and therefore feel comfortable talking to her about their lives and aspirations. They understand she too transferred from a junior college to a university and did research as an undergraduate.

Rios thinks he would like to teach. His major is physics, and he tutors eighth graders. "Is it hard?" his students ask him. "Yes, it is," he replies honestly, "but also really, really fun." Rios adds, "Anything that's worth it is hard." The eighth graders ask why he chose to major in science and math complaining how boring it is. "I don't blame them...you need to engage them. If you don't, they're going to lose interest really, really fast."

He's helping them get off on the right foot. An interest in the STEM fields should be nurtured—and that starts with building the young person's confidence. ■

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